AQE15 and AQE30
Power over Ethernet Midspan Injector
Installation Manual

SECURITRON®

ASSA ABLOY

Description

The AQE line of Power over Ethernet (PoE) MidSpan Injectors are available at 15.5 watts (W) and 30W in accordance with the requirements in the Institute of Electrical and Electronics Engineers (IEEE) Standard 802.3, "Ethernet."

The AQE line of MidSpan Injectors provides PoE compliant power to PoE compatible devices such as Internet Protocol (IP) cameras, infrared (IR) illuminators, access control panels and readers, or to non-PoE devices using a PoE Extractor such as the AQE30E.

Regulatory Information

The equipment discussed within this manual has been tested to the following standards:

- UL Standard UL294b, "The Standard of Safety for Access Control System Units"

- International Electrotechnical Commission (IEC) and UL Standard IEC/UL 60950-1, "Components"

- Canadian Standards Association Standard C22.2 No. 205-M1983, "Signal Equipment"

## Mounting the AQE Series Module

The AQE line of Midspan Injectors mount using two screws in the mounting tabs. The unit must be mounted in a secure, indoor, dry location to a suitable surface, using suitable hardware.
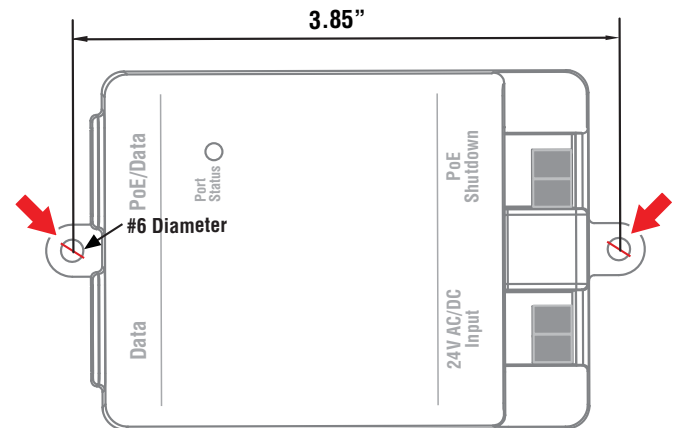
Specifications

	AQE15	AQE30
Input Voltage	24 volts (V) Alternating Current (AC) or 24V Direct Current (DC) ±15%	24 VAC or 24 VDC ±15%
Input Current	1.4 Amperes (A) Maximum (Max) AC or DC	2.6A Max AC or DC
Output Power	15.4W (IEEE802.3af)	30W (IEEE802.3at)
Output Voltage	50 VDC	50 VDC
Output Current	300 mA	600 mA
Shutdown Terminals	5–24 VDC @ 10 mA Max	5–24 VDC @ 10 mA Max
Data Cable Length	328 feet (ft) or 100 meters (m) Max	328 ft (100 m) Max
Data Rate	10/100 Base-T	10/100/1000 Base-T
ESD Immunity	8 kilovolts (kV)	8 kV
PoE Pin Assignment	Positive (VCC+): Pins 4, 5	Positive (VCC+): Pins 4, 5
	Negative (VCC–): Pins 7, 8	Negative (VCC–): Pins 7, 8
	Data: Pins 1, 2, 3, 6	Data: Pins 1, 2, 3, 4, 5, 6, 7
Operating Ambient Temperature	0 to 49°C, Indoor Dry Locations	0 to 49°C, Indoor Dry Locations
Storage Temperature	−20 to +70°C	−20 to +70°C
Operating Humidity	5 to 95% (Non-Condensing)	5 to 95% (Non-Condensing)
Size	4.20" L x 2.50" W x 1.20" D (107mm L x 64mm W x 31mm D)	4.20" L x 2.50" W x 1.20" D (107mm L x 64mm W x 31mm D)
Weight	0.25 pounds (lb) or 0.11 kilograms (kG)	0.30 lb (0.14 kG)

AQE15/AQE30 – Module Overview
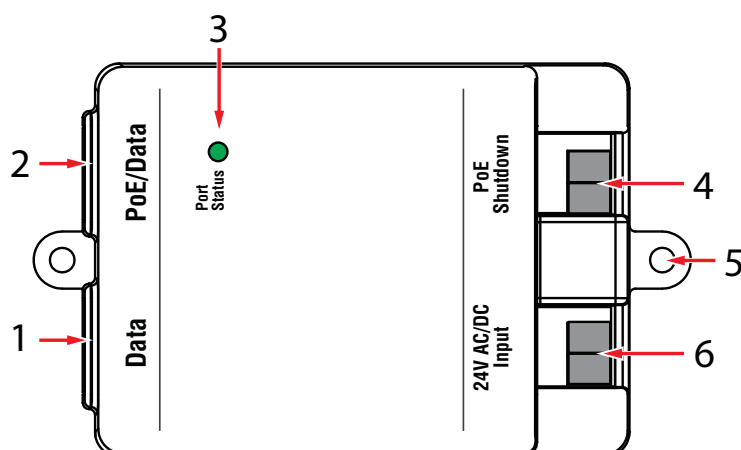
❶ Data

This is the non-PoE input from the network switch. This connector is an RJ45 jack and accepts a CAT-5 cable.

❷ PoE/Data

This is the PoE output to the camera or other device to be powered. See the Specifications section for ratings. This connector is an RJ45 jack and accepts a CAT-5 cable.

❸ Port Status (Green)

This LED shows the status of the AQE MidSpan Injector.

See the appropriate status chart for more information.

❹ PoE Shutdown

This input will shut down the PoE output of the AQE MidSpan Injector. This can be useful for rebooting devices that have

become non-responsive. These terminal strips accept wire sizes from AWG14–AWG22. To shut down the PoE Output, apply any DC voltage within the ratings shown under "Shutdown Terminals" in the Specifications section of this manual.

❺ Mounting Tab

The mounting tab centers are spaced 3.85" on center. Refer to the mounting guide (page 1) for mounting details.

❻ 24 VAC or 24 VDC Input

This is the power supply input for the AQE MidSpan Injector. These terminal strips accept wire sizes from AWG14–AWG22.See the Specifications section for more information. When using DC voltage, the voltage may be connected in either polarity.

AQE15 / AQE30 - Status LED

| AQE15 Port Status	LED State	Flash Pattern
No Primary Power to Unit	OFF	LED OFF
No Connection on PoE/Data Port	OFF	LED OFF
Operation Normal	ON	LED ON
Improper Load Device–Signature Resistance too low	Flashing	1 Flash
Improper Load Device–Signature Resistance too high	Flashing	2 Flashes
Port Overload Fault	Flashing	5 Flashes

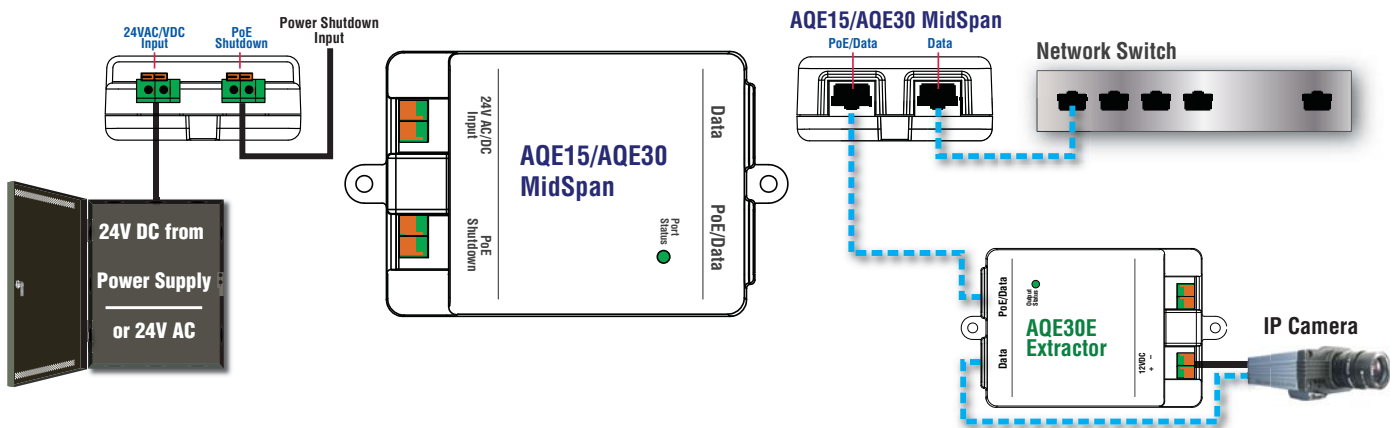| AQE30 Port Status	LED State	Flash Pattern
No Primary Power to Unit	OFF	LED OFF
No Connection on PoE/Data Port	OFF	LED OFF
Operation Normal	ON	LED ON
Improper Load Device	Flashing	5 Flashes
Port Overload Fault	Flashing	2 Flashes

Example Wiring - Block Diagrams

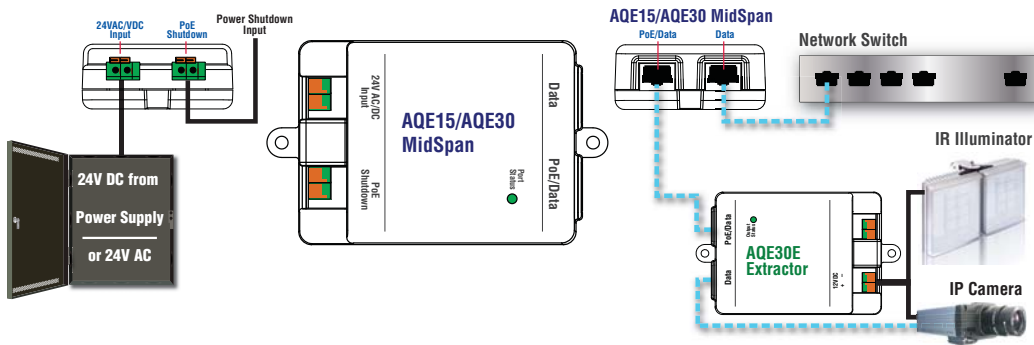## a) Powering a PoE Reader
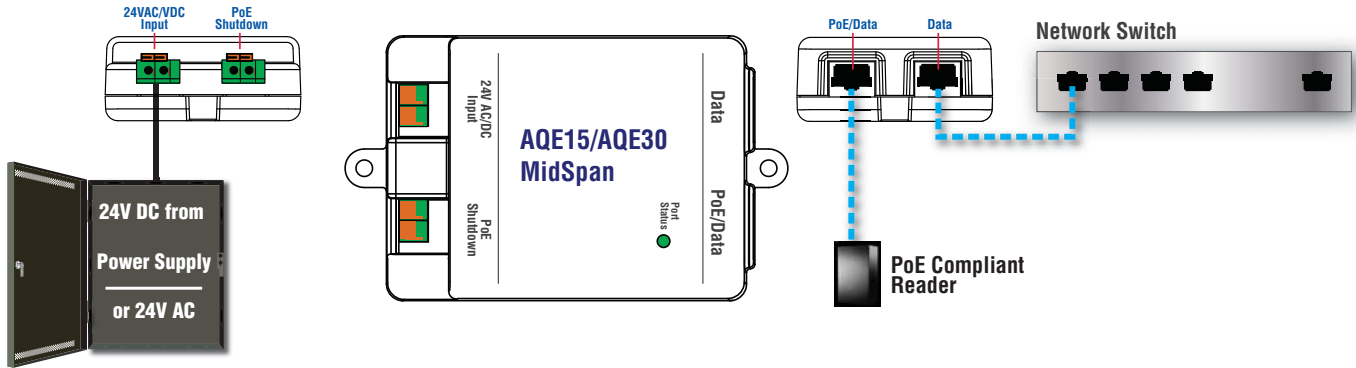
b) Powering a PoE Camera
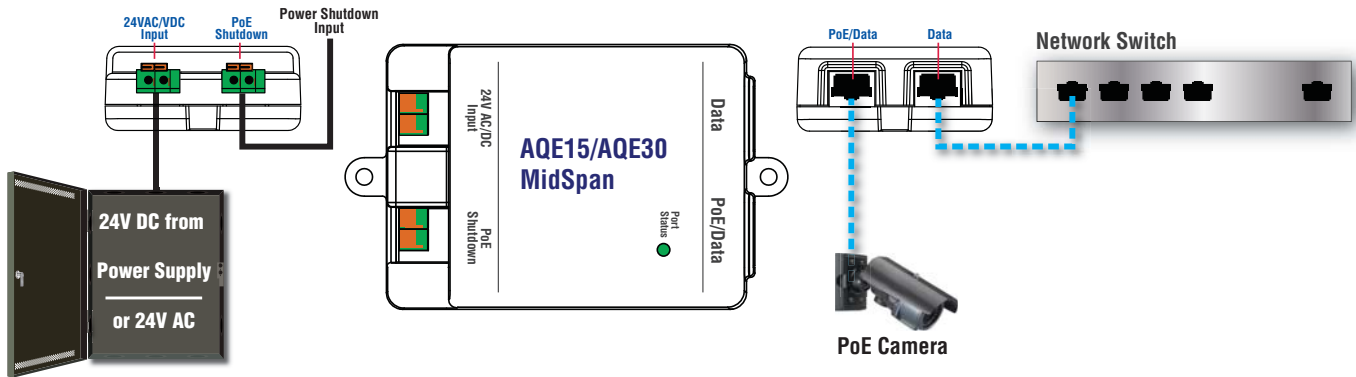
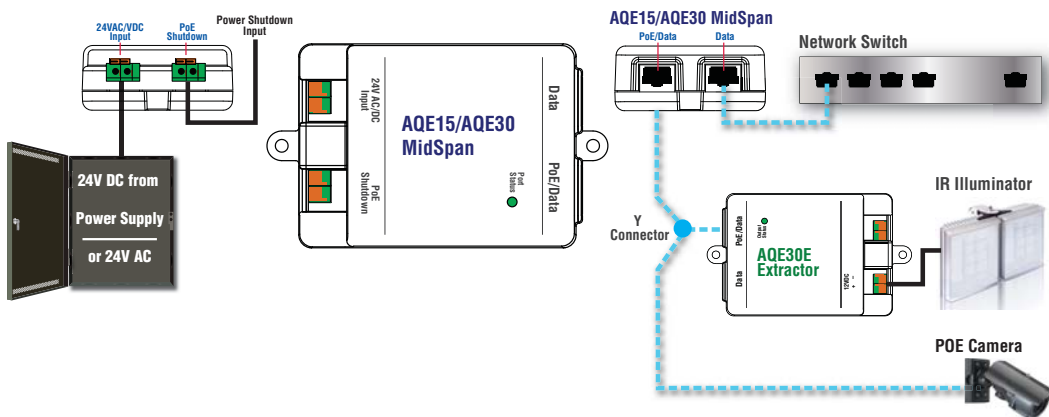## c) Power & Data for a non-PoE IP Camera

Example Wiring - Block Diagrams (continued)

d) Power & Data for a non-PoE IP Camera and Illuminator

e) Power & Data for PoE Camera and non-PoE IR Illuminator

f) Powering a PoE Access Controller with AQE30